

Application No. 10/026,055
Amendment to Office Action dated December 28, 2004
Reply to Office Action mailed September 28, 2004

AMENDMENTS TO THE CLAIMS

The listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A vertical cavity surface emitting laser, comprising:

an active region further comprising at least one quantum well having a depth of at least 40 meV, wherein said depth is defined using the difference between a valence band offset and a conduction band offset, said quantum well being comprised of InGaAs and further including GaAsN barrier layers sandwiching said at least one quantum well; and

GaAsN confinement layers sandwiching said active region.

2. (Previously Presented) The vertical cavity surface emitting laser of claim 1 wherein said at least one quantum well is up to and including 50Å in thickness.

3. (Previously Presented) A vertical cavity surface emitting laser, comprising:

an active region further comprising at least one quantum well having a depth of at least 40 meV, wherein said depth is defined using the difference between a valence band offset and a conduction band offset, said quantum well being comprised of InGaAs and further including GaAsN barrier layers sandwiching said at least one quantum well; and

AlGaAs confinement layers sandwiching said active region.

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4. (Previously Presented) The vertical cavity surface emitting laser of claim 3 wherein said at least one quantum well is up to and including 50Å in thickness.

5. (Previously Presented) A vertical cavity surface emitting laser, comprising:

an active region further comprising at least one quantum well having a depth of at least 40 meV, wherein said depth is defined using the difference between a valence band offset and a conduction band offset, said quantum well being comprised of InGaAs and further including AlGaAs barrier layers sandwiching said at least one quantum well; and

GaAsN confinement layers sandwiching said active region.

6. (Previously Presented) The vertical cavity surface emitting laser of claim 5 wherein said at least one quantum well is up to and including 50Å in thickness.